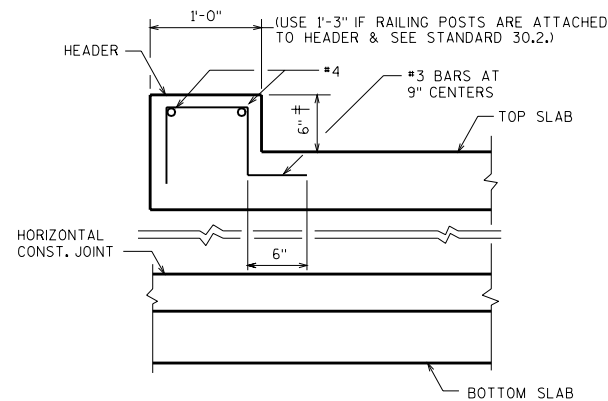
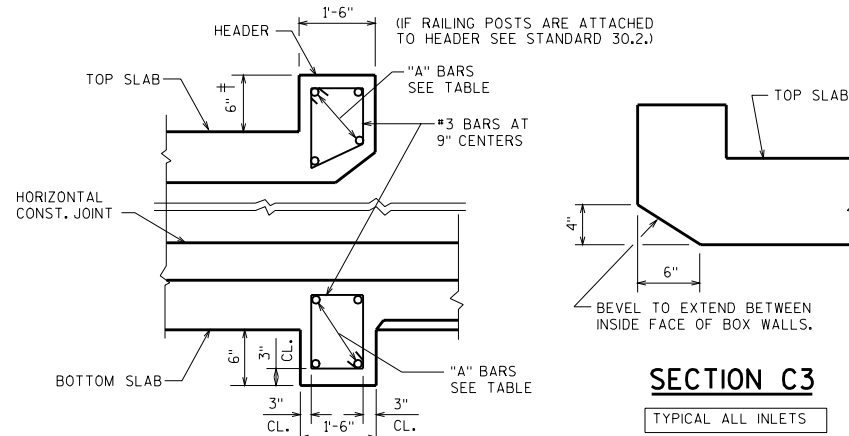


PLAN



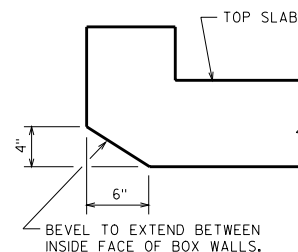
SECTION C2 FOR SKEW OF 20° AND UNDER

OUTLET HEADERS SHOWN



SECT C2 FOR SKEW OVER 20°

‡ IF RAILING POSTS ARE ATTACHED TO HEADER THIS DIMENSION MAY BE INCREASED IF NECESSARY TO KEEP RAILING PARALLEL TO ROADWAY. INCREASE WING HEIGHT IF NECESSARY.

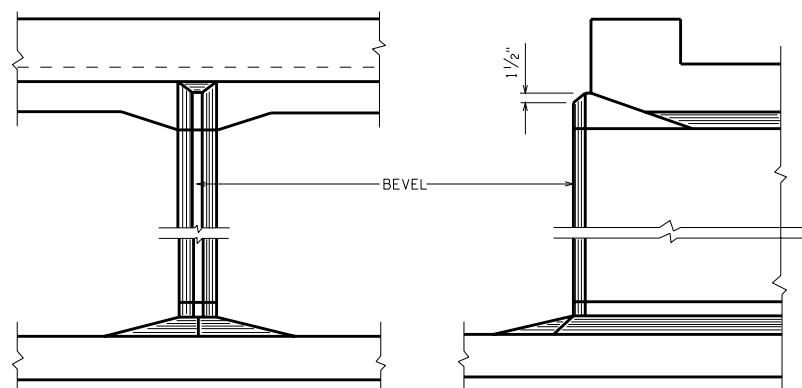


SECTION C3

TYPICAL ALL INLETS

* HEADER LENGTH	"A" BARS
TO 10'-0"	4 - #7
OVER 10'-0" - 13'-0"	4 - #8
OVER 13'-0" - 16'-0"	4 - #9
OVER 16'-0" - 20'-0"	4 - #10

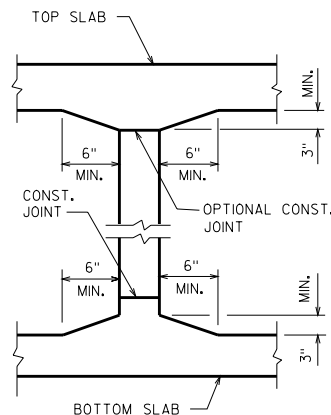
\* HEADER LENGTH EQUALS THE DISTANCE BETWEEN C. OF WALLS IN ONE CELL MEASURED ALONG THE SKEW.



ELEVATION

SECTION C4

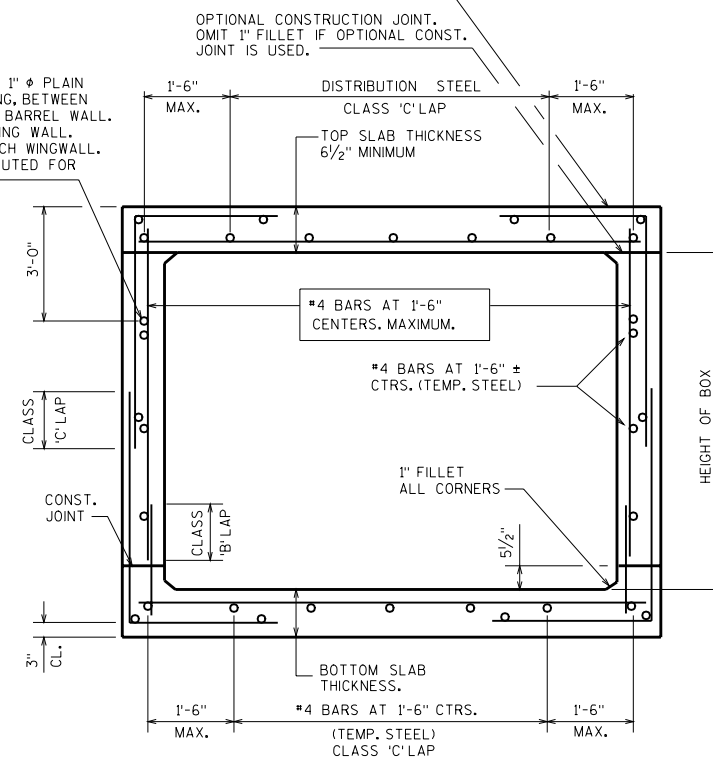
INLET NOSE CENTERWALL DETAILS



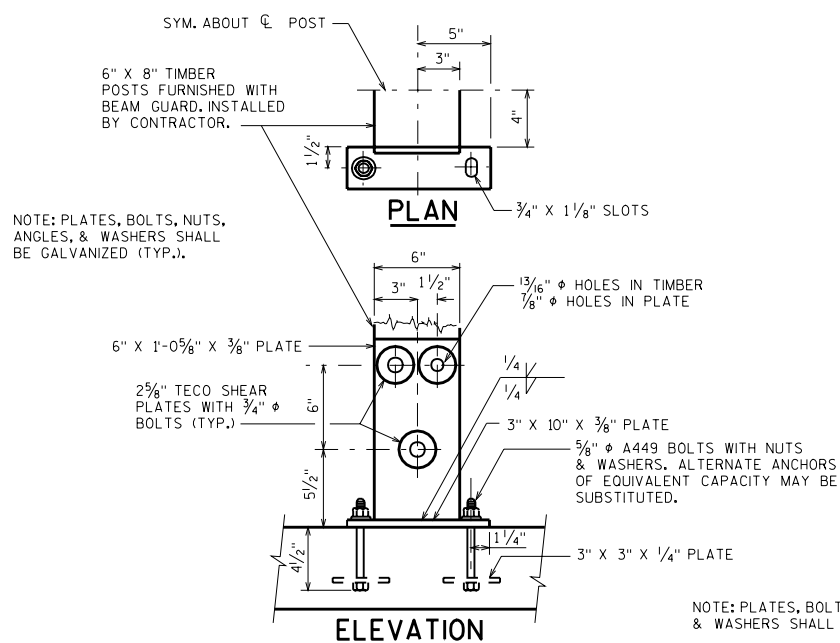
SECTION C5

NOTE:  
FOR MULTI-CELL CULVERTS IN THE TOP OF TOP SLAB, USE #4 BARS AT 1'-0" IN THE LONGITUDINAL DIRECTION AND A MIN. OF #4 BARS AT 1'-6" IN THE TRANSVERSE DIRECTION WHEN THE TOP SLAB IS AN INTEGRAL PART OF WEARING SURFACE.

FOR "HEIGHT OF BOX" > 6'-0", PLACE 1"  $\phi$  PLAIN (SMOOTH) ROUND DOWEL BAR, 2'-6" LONG, BETWEEN BARREL AND WINGS. EMBED 1'-3" INTO BARREL WALL. USE DEBONDER ON EXTENSION INTO WING WALL. BEND AS REQUIRED, ONE BAR FOR EACH WINGWALL. ASTM A36 MATERIAL MAY BE SUBSTITUTED FOR AASHTO M31.



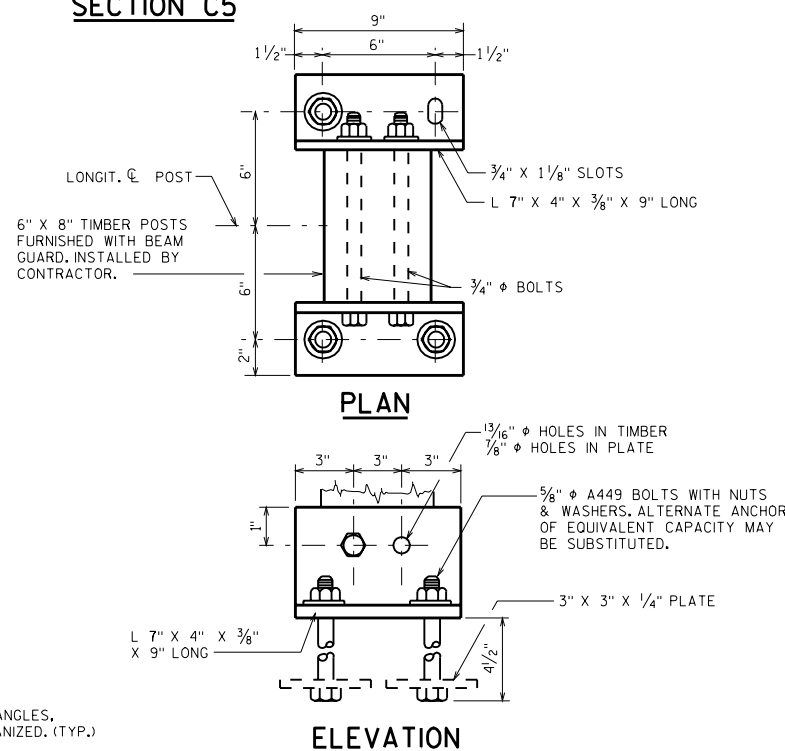
SECTION THRU BOX



ELEVATION

TIMBER GUARD RAIL POST ANCHORS TYPE 1

USE FOR POSTS EMBEDDED 2'-0" OR LESS.



ELEVATION

TIMBER GUARD RAIL POST ANCHORS, TYPE 2

USE FOR POSTS EMBEDDED OVER 2'-0" BUT LESS THAN 4'-0" ANCHORS NOT REQ'D FOR POSTS EMBEDDED 4'-0" OR MORE

## BOX CULVERT DETAILS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION  
STRUCTURES DEVELOPMENT SECTION

APPROVED:

*Stanley W. Woods*

DATE:

7/00